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Cronan O'Connell
Vice President-Federal Regulatory

EX PARTE

November 26, 2002

Ms. Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street S.W., TW-A325
Washington, DC 20554

RE: CC Docket Nos. 01-338, 96-98 and 98-147, In the Matter of Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers; Implementation of the Local Competition Provisions of the Telecommunications Act of 1996; Deployment of Wireline Services Offering Advanced Telecommunications Capability

Dear Ms. Dortch:

Yesterday, Cronan O'Connell and Mary Retka of Qwest Communications International Inc. ("Qwest"), met with the following Federal Communications Commission staff members: Thomas Navin, Jeremy Miller, Brent Olson, Gina Spade, Robert Tanner, Julie Veach and Elizabeth Yockus of the Wireline Competition Bureau's Competitive Policy Division and Jeffery Goldthorp, Ghaffari Behzad and Daniel Shiman of the Office of Engineering and Technology/Network Technology Division. The information in the attached presentations concerning Triennial Review issues was reviewed. In particular, Qwest discussed line sharing, loops provisioned on digital loop carrier and unbundled packet switching.

In accordance with FCC rule 1.49(f), this *Ex Parte* letter and attachments are being filed electronically *via* the Electronic Comment Filing System for inclusion in the public record of the above-referenced dockets pursuant to FCC Rule 1.1206(b)(2).

/s/ Cronan O'Connell

cc: (via e-mail with attachments)
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Attachments

Qwest®
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Triennial Review:
Advanced Services Ex Parte

November 25, 2002

Advanced Services -- Summary

- Line Sharing
  - The Commission should not reinstate or expand the Line Sharing obligation
- Loops provisioned on Digital Loop Carrier (DLC)
  - The Commission should not require further advanced services unbundling
- Unbundled Packet Switching (UPS)
  - As the Commission concluded in the UNE Remand Order, UPS should not be required

Line Sharing

Line Sharing

- The FCC should not expand the advanced services requirements in the Triennial Review, in fact it should recognize Line Sharing as a failed experiment
  - At the CLEC's request, Qwest has provided Line Sharing collocation configurations in all 346 offices where it was requested
  - To date, CLECs have not requested Line Sharing on any loop in 53% of those offices
  - CLECs currently line share on only 21,285 lines or 0.5% of the qualified lines available within these 346 offices

Digital Loop Carrier (DLC)

Digital Loop Carrier (DLC)

- The FCC should not require Qwest to provide further advanced services unbundling
  - CLECs have equivalent access to Qwest for all loop elements in a DLC architecture
  - CLECs have capability to collocate equipment in the outside plant e.g., DA hotel

How Does a CLEC Access the Unbundled Loop When There is Fiber in the Feeder and the Loop is Integrated into the Switch?

Options	Capabilities
• First option: via an available copper loop if one exists	• CLEC can access copper loop at central office - DSL capable (distance limitations may apply)
• Second option: If copper not available and if UDLC is available, provide UBL over UDLC and present at the ICDF	• CLEC can access copper loop at the remote terminal to provide ADSL • CLEC can access access loop at central office -- not DSL capable at the central office
• Third option: If neither copper loop or UDLC is available then the "Hairpin" option is the means to provide the UBL Hairpin: A semi-permanent path through a Switching Module (SM) between two (2) ports on the same peripheral equipment, such as an Integrated Digital Carrier Unit (IDCU). The SM's Time Slot Interchange (TSI) is bypassed and not used. Normal switch call-processing functions are not used. This is a last resort solution to provisioning an Unbundled Loop (UBL) over Integrated Digital Loop Carrier (IDLC)	• CLEC can access copper loop at the remote terminal to provide ADSL • CLEC can access access loop at central office -- not DSL capable at the central office **This is equivalent to what Qwest does for itself**

Sub Loop Feeder Options

- For CLECs collocating their DSLAM in the Qwest DA hotel, or in their own Remote Collocation in Qwest's Outside Plant, Qwest provides Sub Loop Feeder
  - Unbundled feeder sub loops
  - Unbundled dark fiber
  - Self provisioned facility

Unbundled Packet Switching (UPS)

In the UNE Remand, the FCC Defines Conditions for UPS:

- *The incumbent Local Exchange Carrier (LEC) has deployed digital loop carrier systems, including but not limited to, integrated digital loop carrier or universal digital loop carrier systems; or has deployed any other system in which fiber optic facilities replace copper facilities in the distribution section*
- *There are no spare copper loops capable of supporting the xDSL services the requesting carrier seeks to offer;*
- *The Incumbent LEC has not permitted a requesting carrier to deploy a Digital Subscriber Line Access Multiplexer (DSLAM) at the remote terminal, pedestal or environmentally controlled vault or other interconnection points, nor has the requesting carrier obtained a virtual collocation arrangement at these subloop interconnection points; and*
- *The incumbent LEC has deployed packet switching capability for its own use.*

Qwest UPS Service Meets FCC Requirements

- Qwest UPS meets FCC UNE Remand Order requirements by offering CLECs access to Qwest's DSL at UBR
- CLEC "Fiber Line Sharing" proposal should be rejected
- "Fiber Line Sharing" is a transparent attempt to obtain Qwest UPS
  - CLECs have proposed that they be provided with an "end to end" Line Sharing UNE where the ILEC has deployed a remote DSLAM.
  - The proposed UNE uses the ILEC distribution, the ILEC DSLAM, ILEC feeder element, and the ILEC ATM switch (similar to the UPS architecture, but without the 4 conditions), but at any bit rate the CLEC specifies, instead of the unspecified bit rate ("UBR") service that Qwest provides its customers, and that its DSLAMS are configured to support.

UPS Facts

- **UPS is available over a Qwest Provided Voice Circuit where Qwest will continue to be the voice provider**
- **UPS utilizes Asynchronous Transfer Mode (ATM) technology to provide the functionality of delivering packet data units via a virtual channel between a CLEC demarcation point and the Remote DSLAM**
- **UPS includes the use of:**
  - **UPS ATM Switch Interface Port**
  - **UPS Customer Channels(s)**
    * Remote DSLAM functionality
    * Virtual Transport
    * Loop facility between the Remote DSLAM and the end-user Network Interface

UPS Facts (cont.)

- Qwest will provide the CLEC with virtual channels at a physical network demarcation point
  - at the InterConnection Distribution Frame (ICDF) in the Central Office (CO) in which the Qwest ATM switch is located
- Collocation is required in the CO of the ATM switch where UPS is available
- UPS Customer Channel with a Shared Distribution Loop provides the opportunity to offer advanced data services simultaneously with an existing end-user's analog voice-grade Plain Old Telephony Service (POTS) provided by Qwest
- CLEC provides the Customer Premises Equipment (CPE)
  - Must be compatible with specific DSLAM equipment deployed by Qwest

UPS Facts (cont.)

- **Qwest will provide CLECs with Unspecified Bit-Rate (UBR) and a minimum bit rate for each UPS Customer Channel**
  - **Constant Bit Rate (CBR) service is only available if the CLEC provides its own virtual transport**
- **UPS Standard Speed Product Offerings**
  - **640k down; 256k to 640k up (not available as 128k up or down, or 256k bi-directional)**
  - **1.024M down; 256k to 1M up - equipment dependent, this speed is not available at all remote locations**

Network Reliability Implications of CLEC Proposal for "Fiber Line Sharing"

- Qwest's DSLAMs and feeder network architecture are configured to provide UBR to support DSL demand
- Constant Bit Rate (CBR) network reliability impacts
  - Existing retail and wholesale customers will experience service quality problems because CBR service drains the bandwidth from all customers receiving UBR service
  - CBR traffic will degrade the existing UBR traffic by slowing its response time.
  - In a worst case scenario, UBR customers cannot reach their ISP

Other Implications of CLEC Proposal for "Fiber Line Sharing"

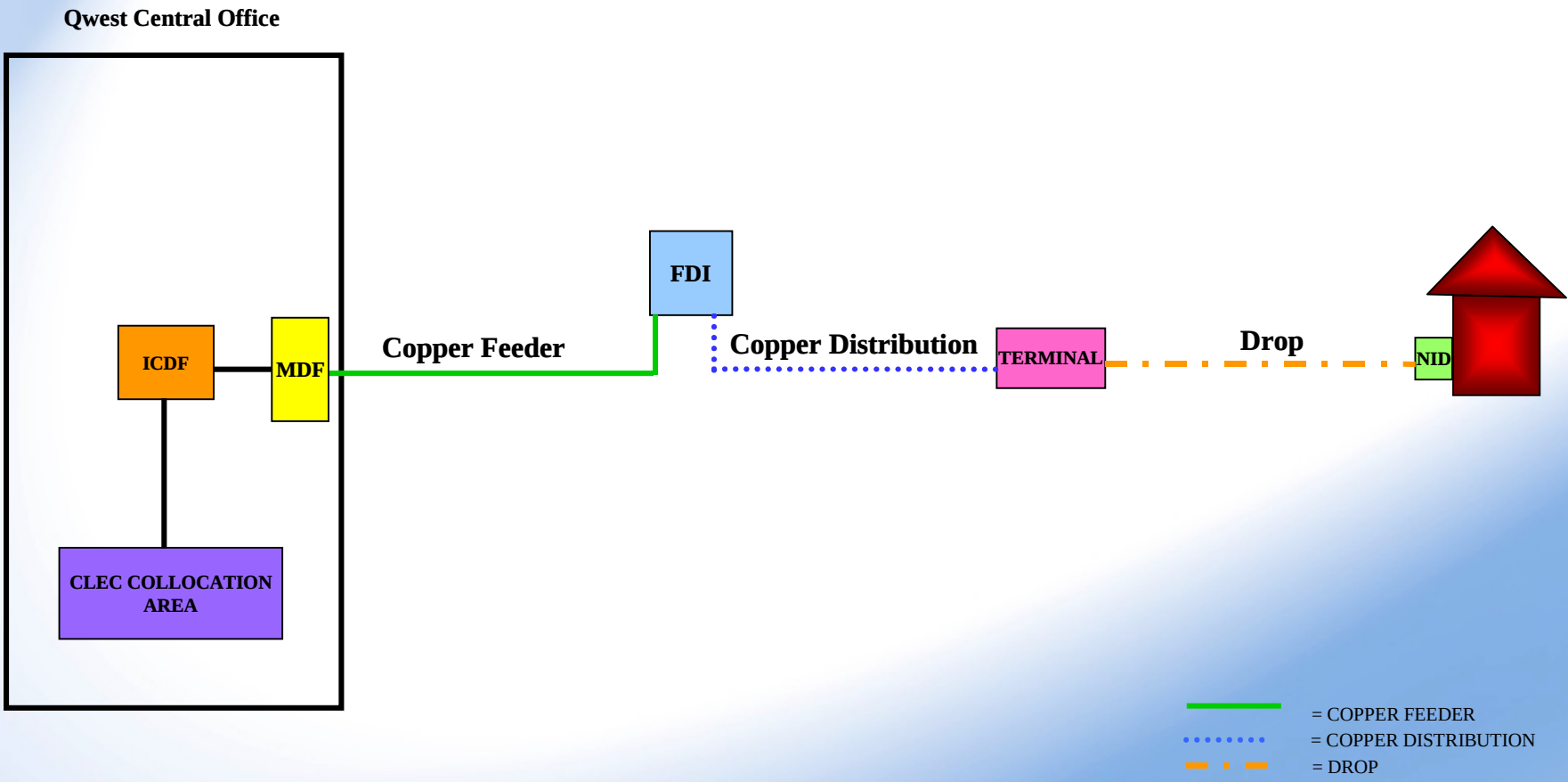
- Such a proposal is inconsistent with the Act
  - CLECs cannot require ILECs to provide services its network does not support or to upgrade its network solely to meet a CLEC's demand for different services
    - Qwest would have to augment its DSLAM and feeder network architecture to provide for the CLEC proposal
  - The Act does not require an ILEC to build competitors their ideal network at their demand. Rather, Section 251(c)(3) requires only unbundling of the ILEC's *existing* network, not a network that the CLECs wish the incumbent had constructed
  - The Eighth Circuit Court of Appeals twice rejected such an interpretation of an incumbent's unbundling obligation, and those rulings stand.

Advanced Services -- Conclusions

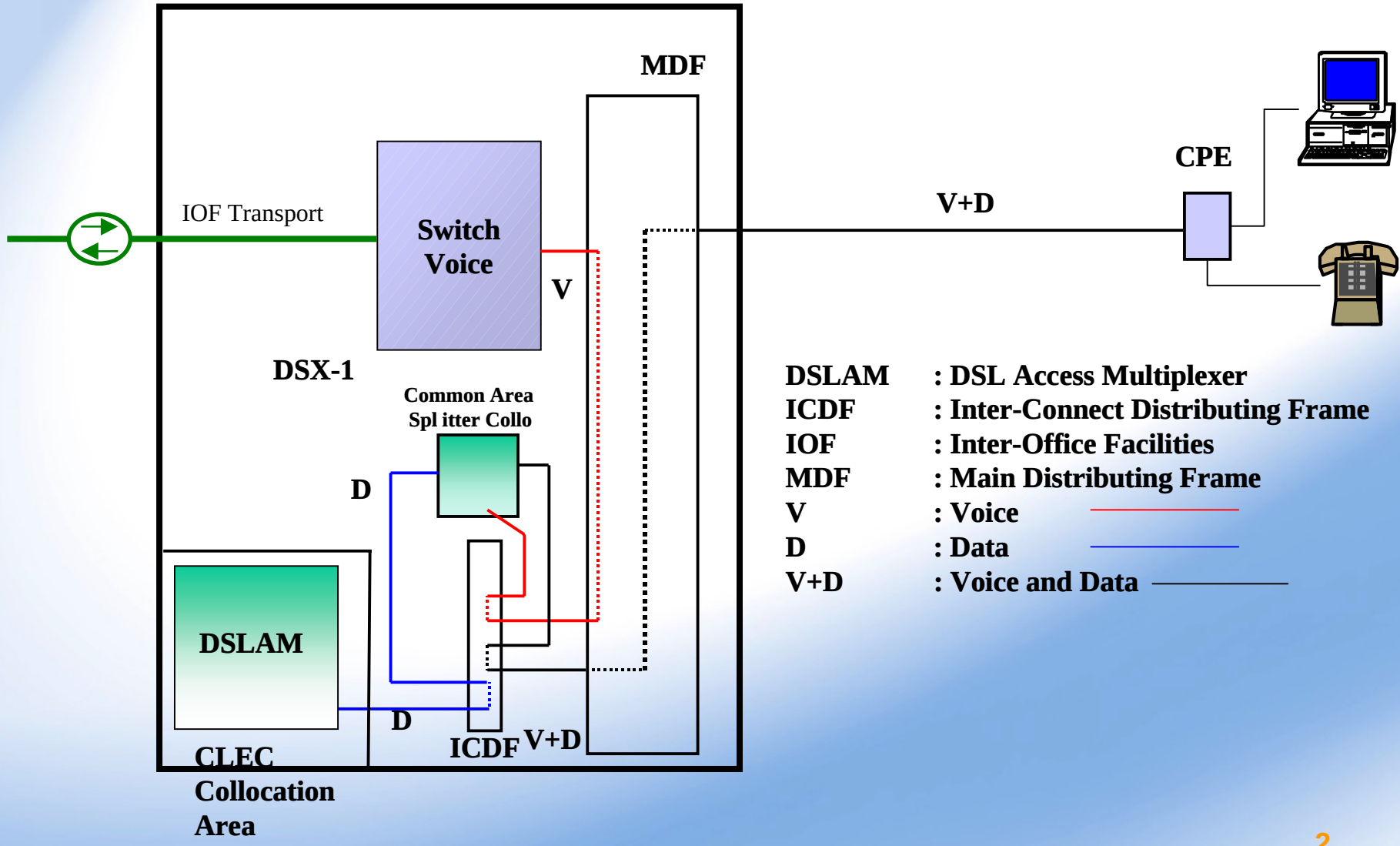
Qwest has made collocation, remote collocation, loop and sub loop elements available to CLECs for the purpose of the provision of their services, including advanced services, to their customers

The FCC should not reinstate or further expand Line Sharing obligations

Full Copper Loop Architecture

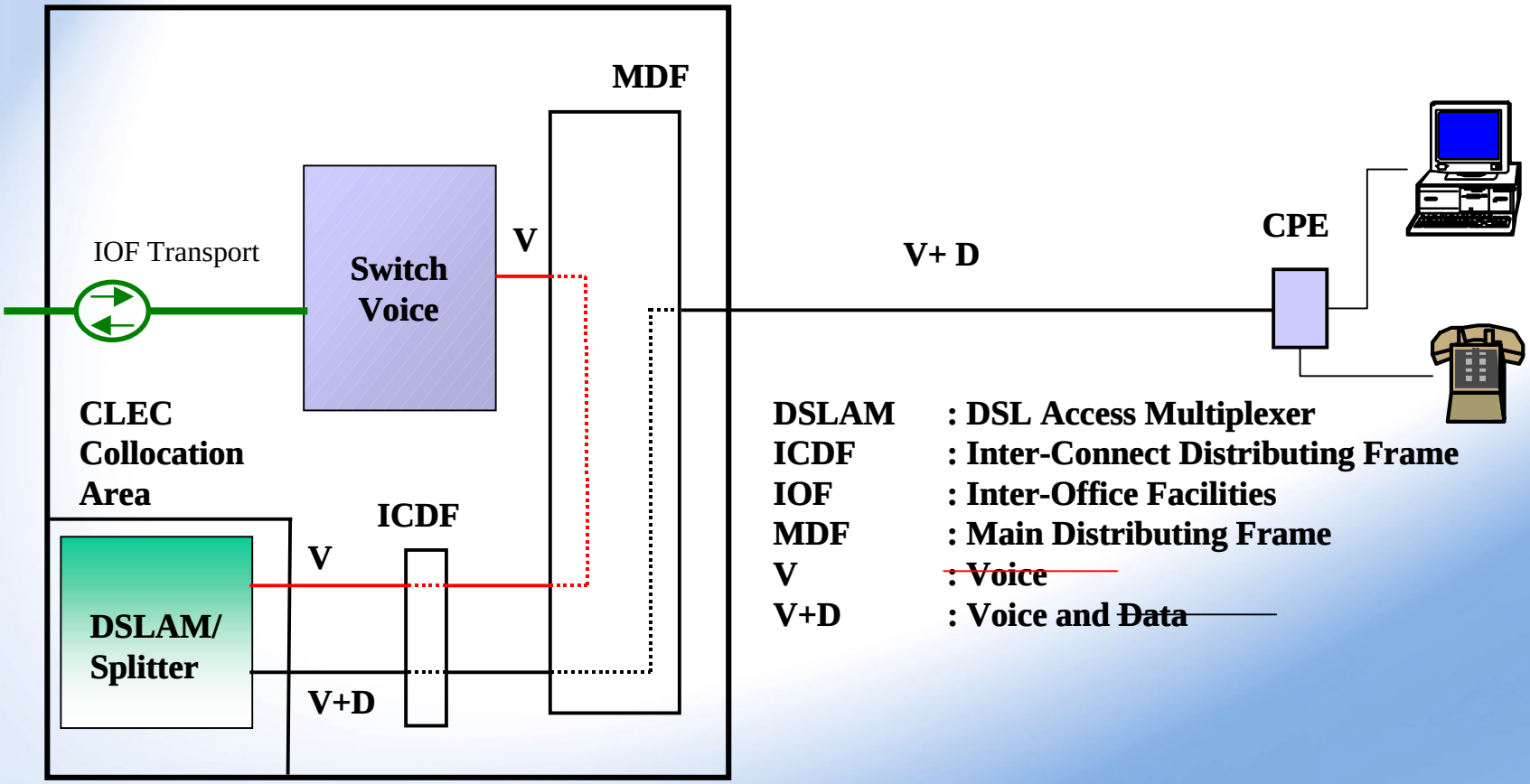


Central Office Line Sharing Architectures and Configurations: Splitter in Common Area

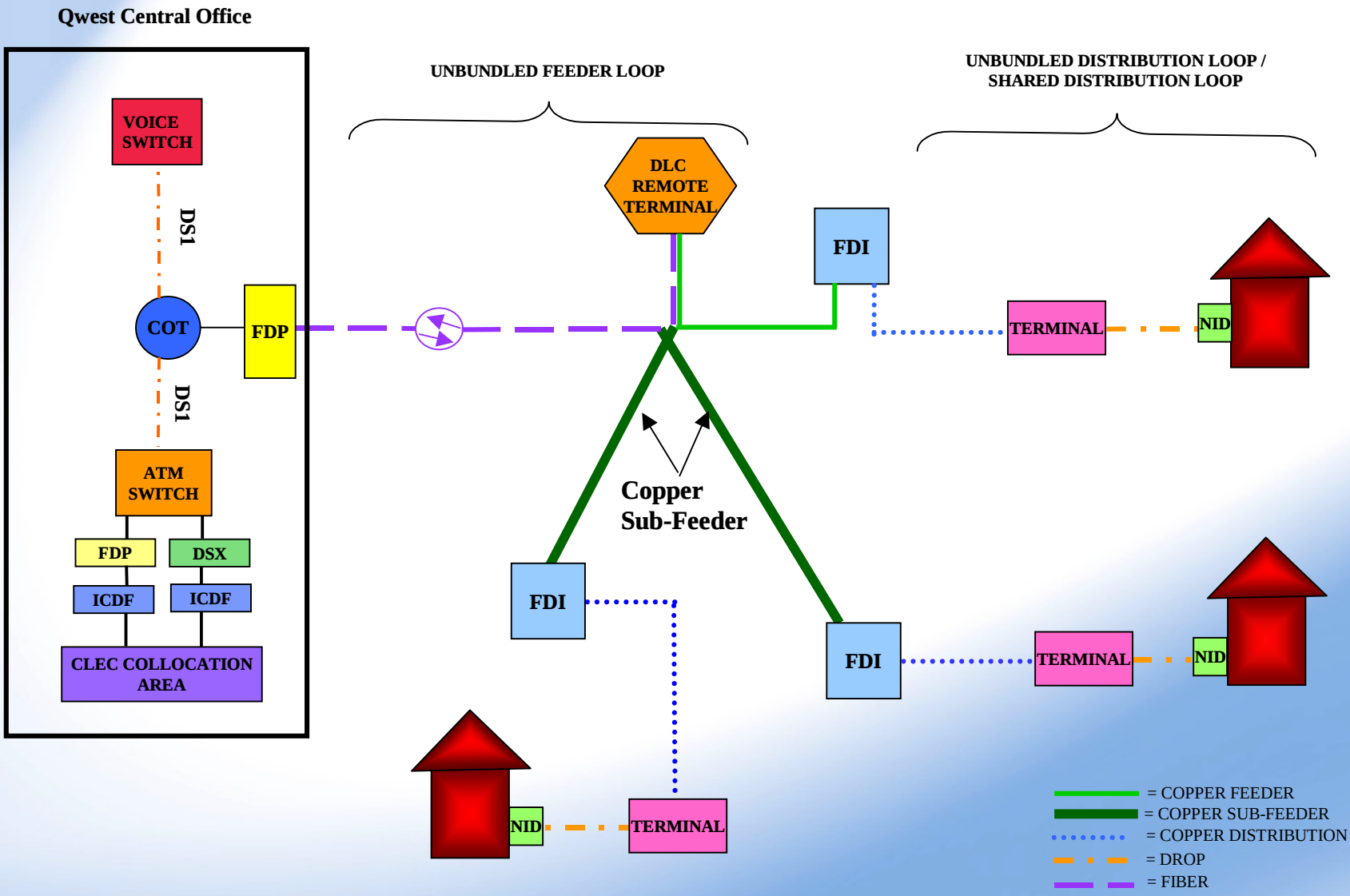


DSLAM : DSL Access Multiplexer
ICDF : Inter-Connect Distributing Frame
IOF : Inter-Office Facilities
MDF : Main Distributing Frame
V : Voice
D : Data
V+D : Voice and Data

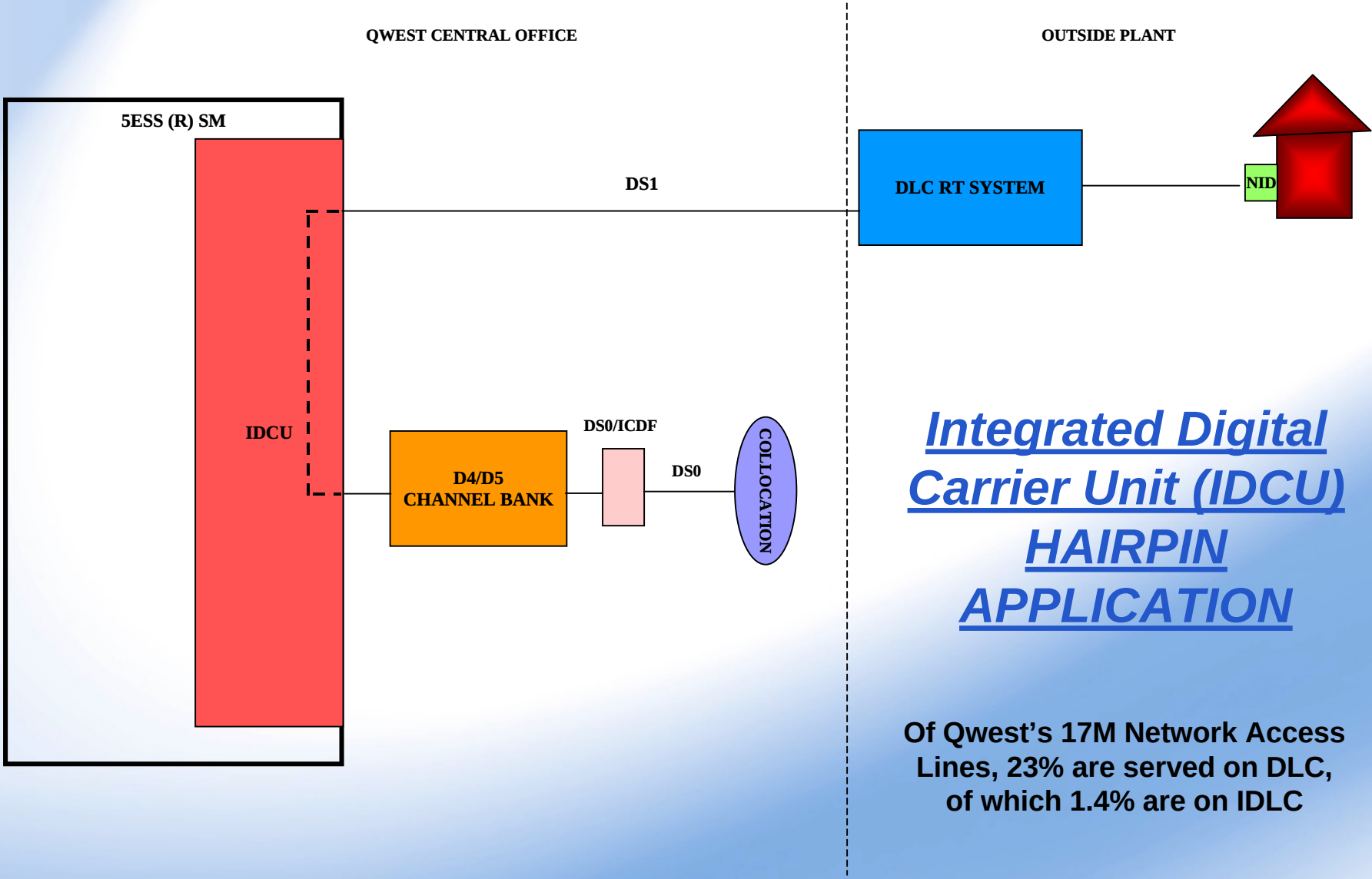
Central Office Line Sharing Architectures and Configurations: Splitter in Collocation Area



DLC Architecture



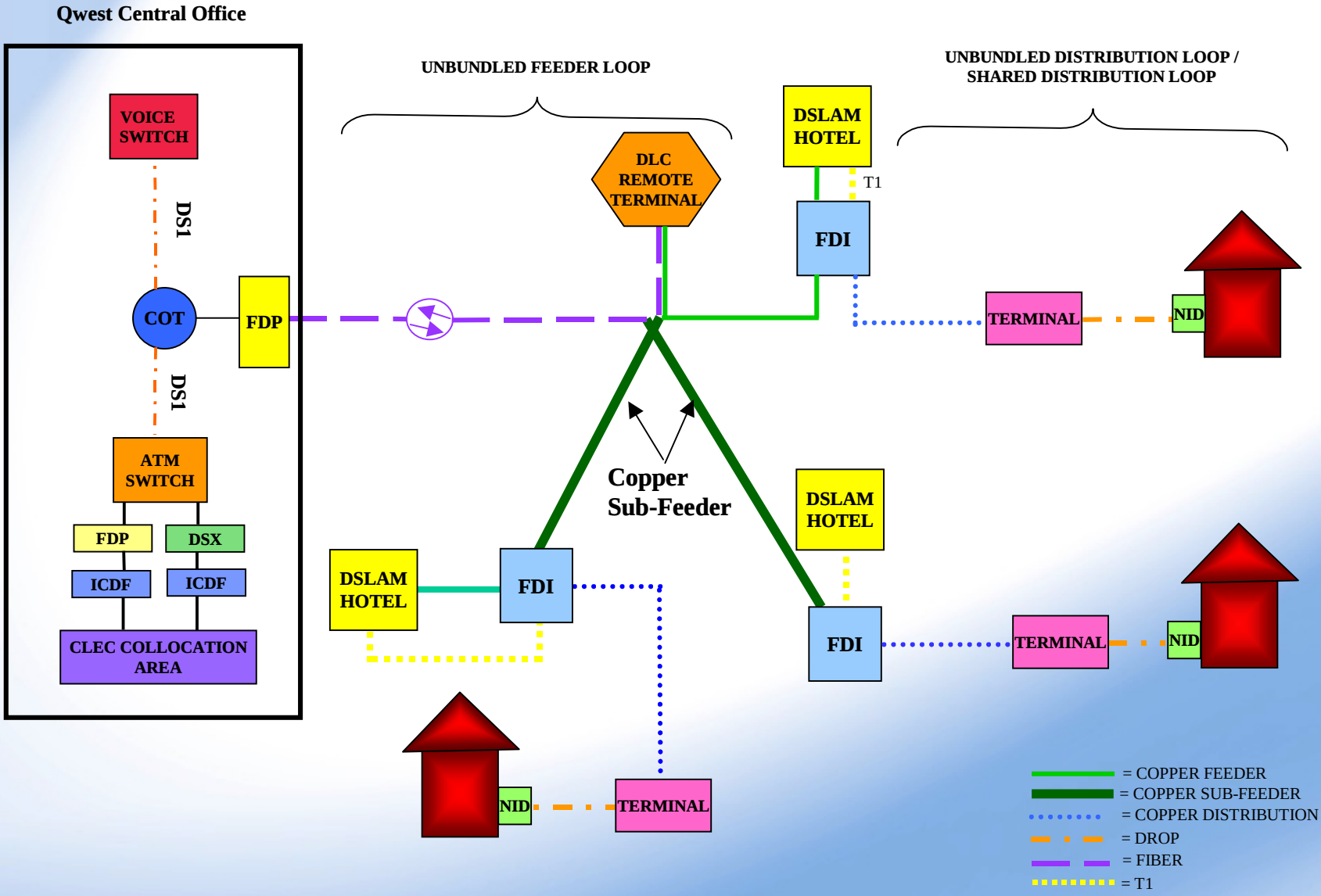
How Does a CLEC Access the Unbundled Loop When There is Fiber in the Feeder?



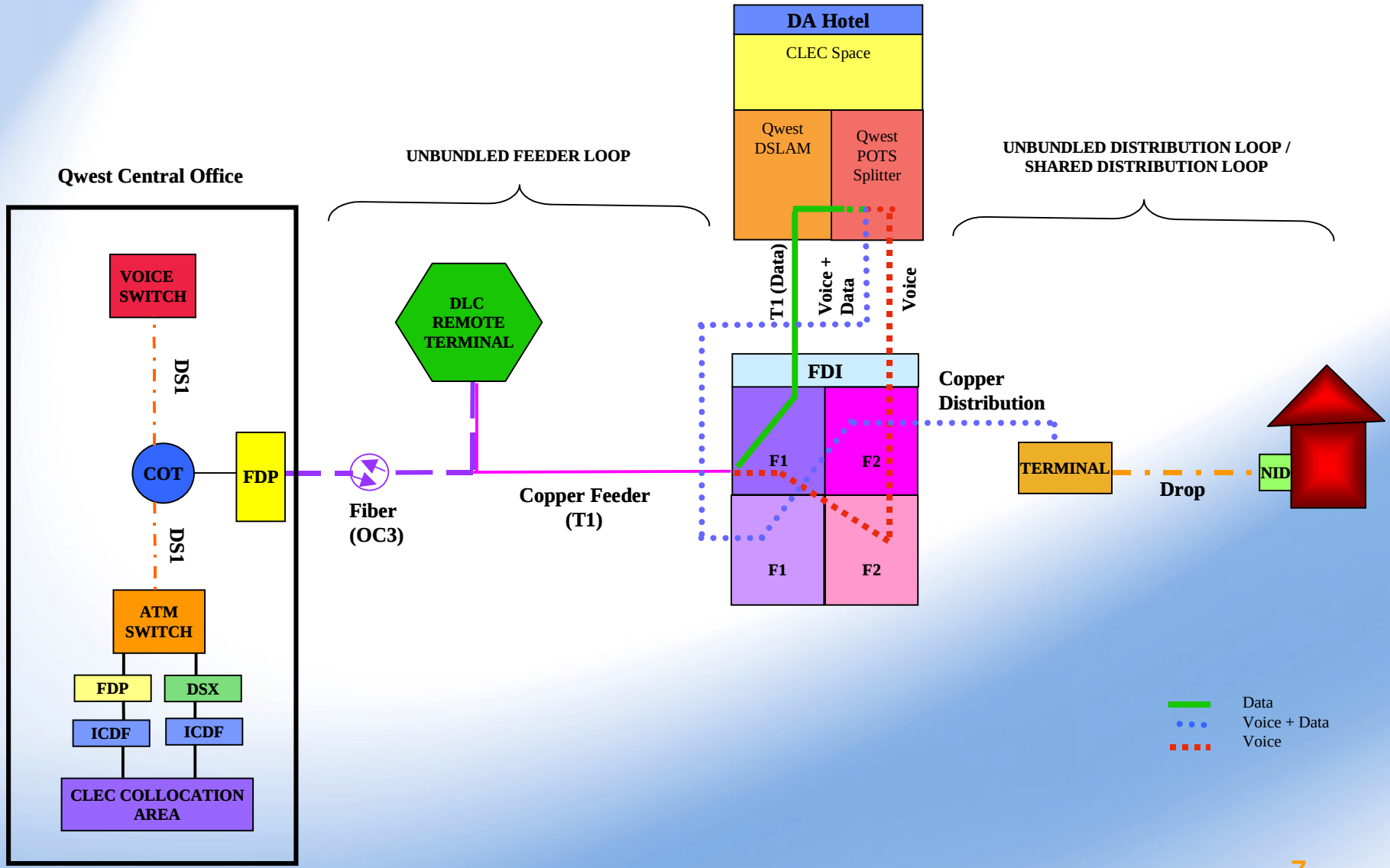
Integrated Digital Carrier Unit (IDCU) HAIRPIN APPLICATION

Of Qwest's 17M Network Access Lines, 23% are served on DLC, of which 1.4% are on IDLC

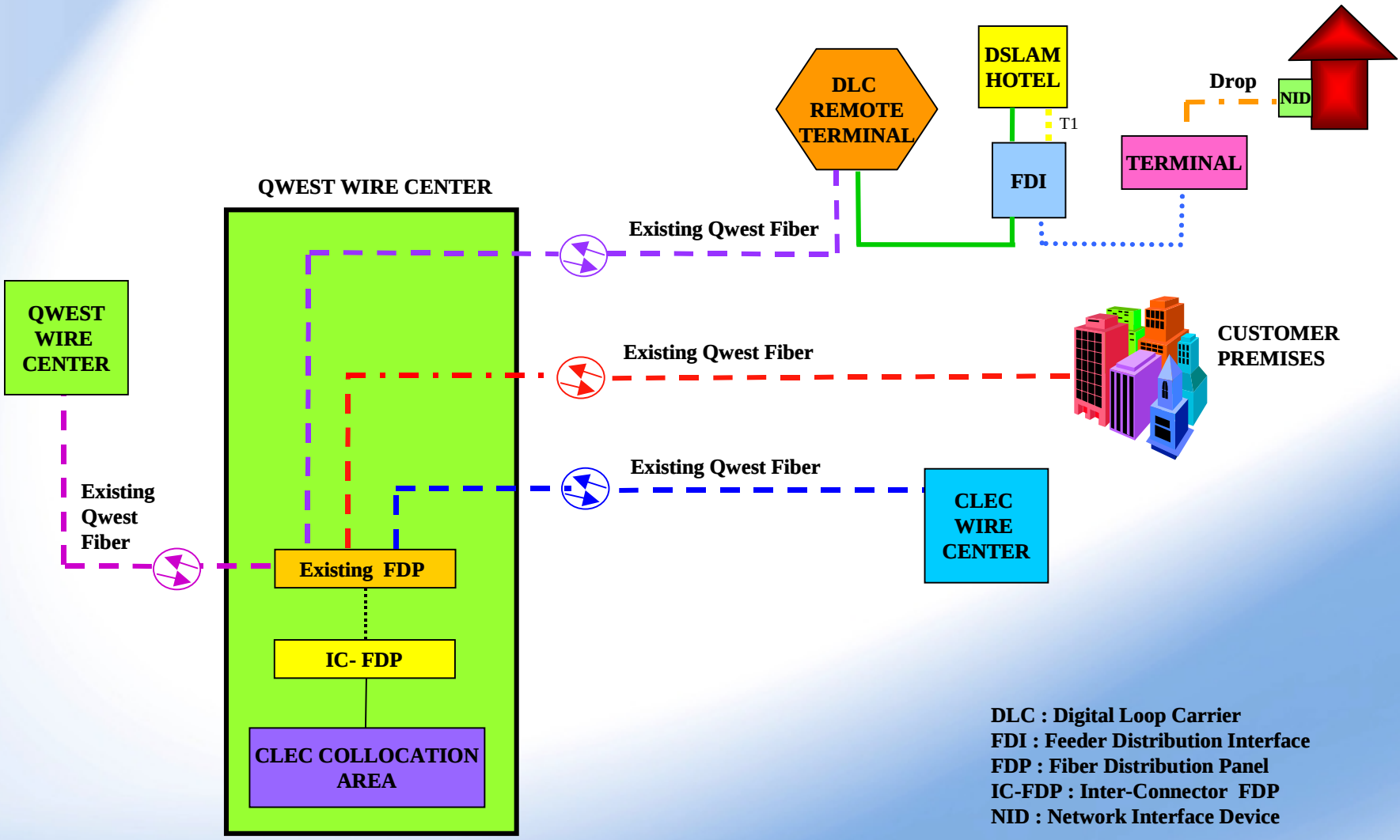
Remote Collocation Architecture



Remote Digital Subscriber Line Architecture



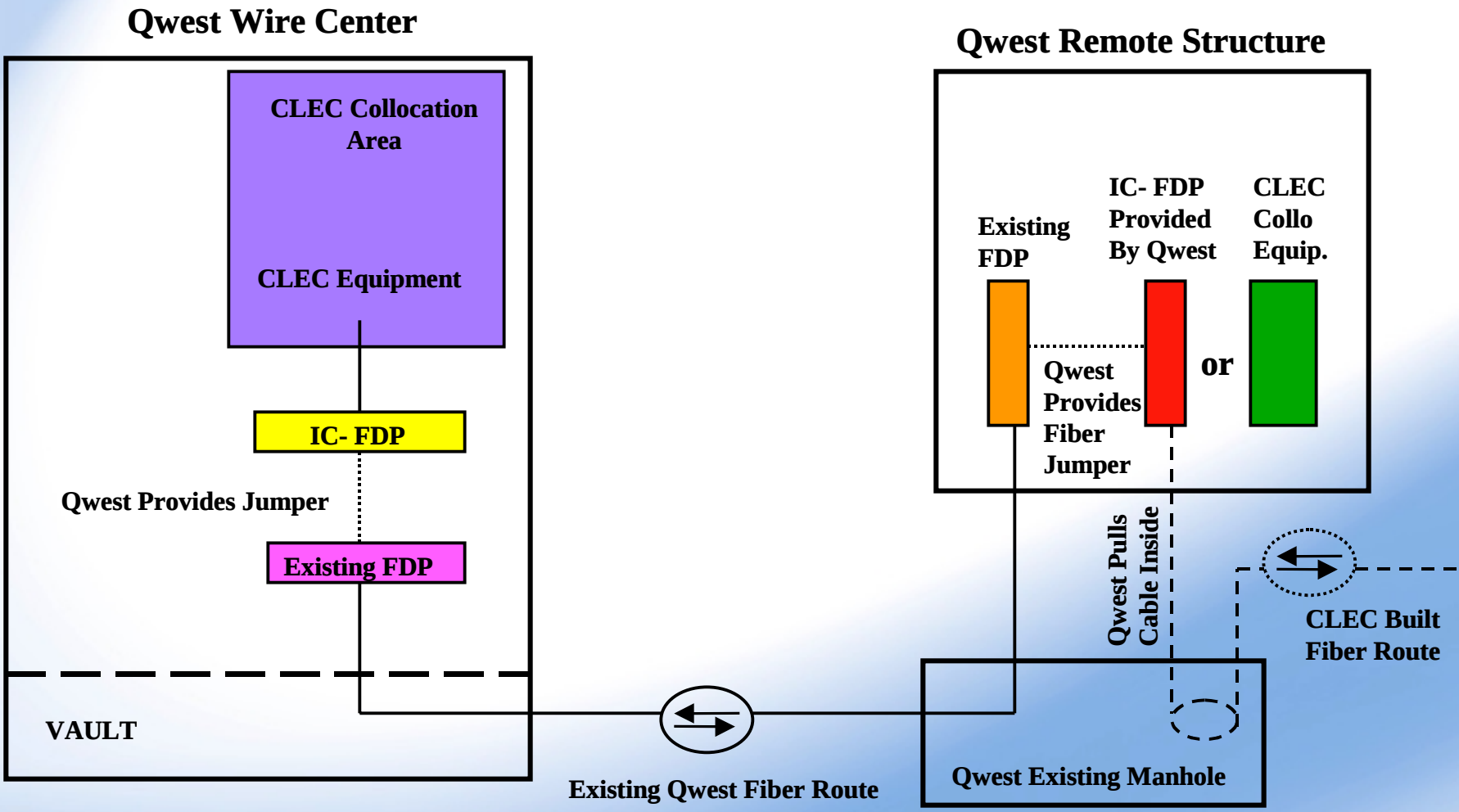
Dark Fiber Architecture



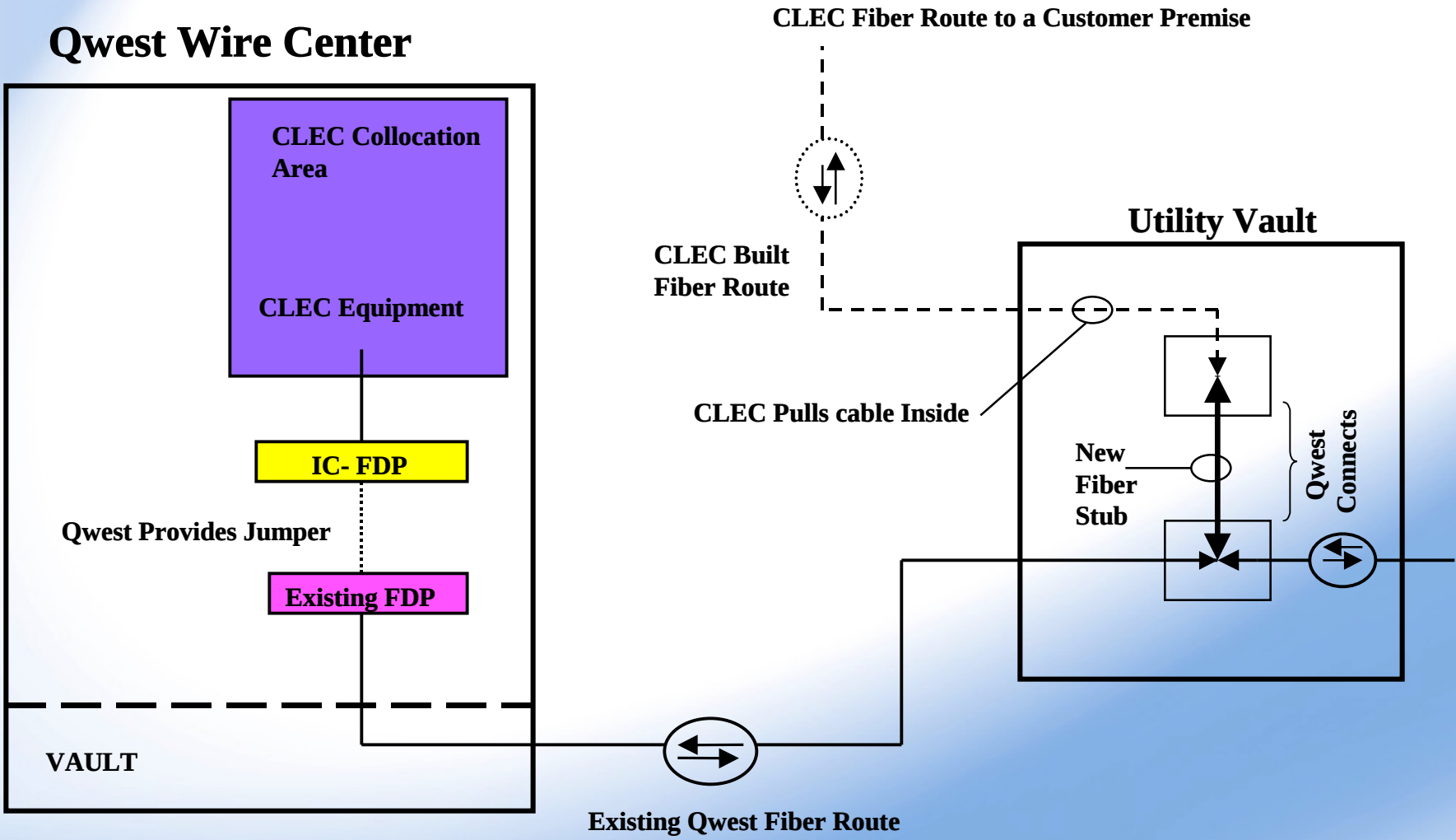
DLC : Digital Loop Carrier
FDI : Feeder Distribution Interface
FDP : Fiber Distribution Panel
IC-FDP : Inter-Connector FDP
NID : Network Interface Device

Dark Fiber Access at a Remote Structure

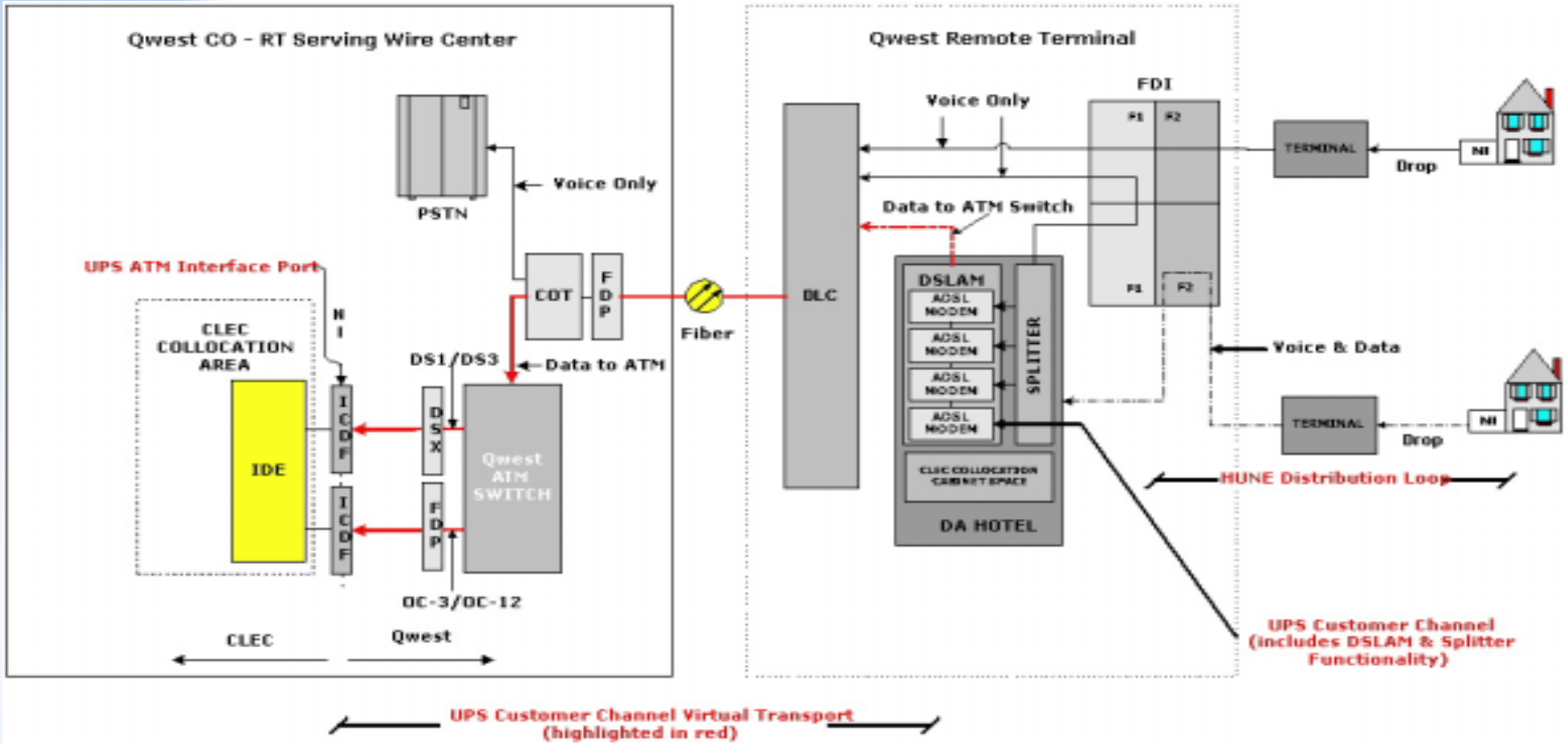
(e.g., CEV, CEC, HUT)



Dark Fiber Access at a Splice Point



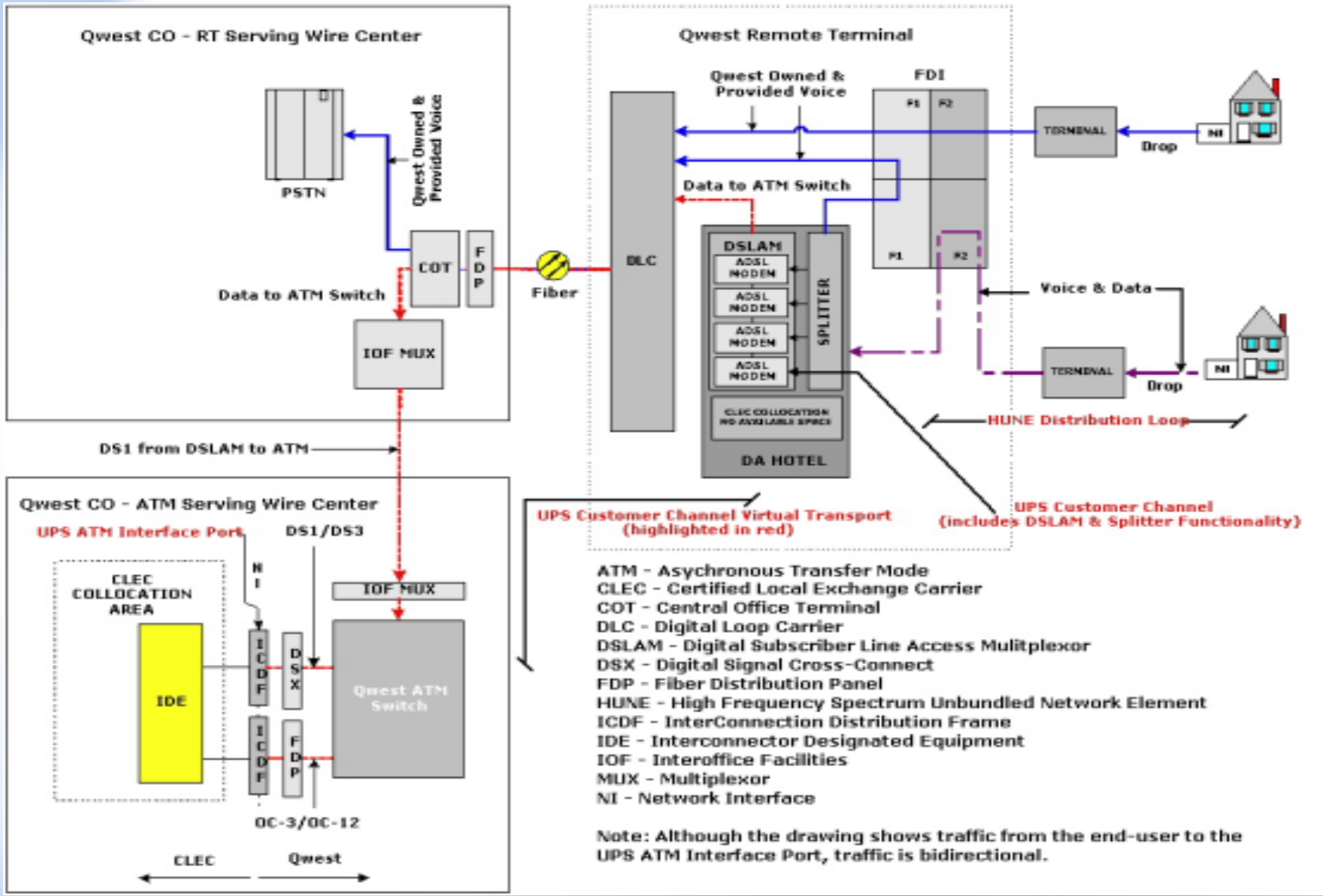
Unbundled Packet Switching - ATM Interface Port in RT Serving Wire Center



ATM - Asychronous Transfer Mode
CLEC - Certified Local Exchange Carrier
COT - Central Office Terminal
DLC - Digital Loop Carrier
DSLAM - Digital Subscriber Line Access Mulitplexor
DSX - Digital Signal Cross-Connect
FDP - Fiber Distribution Panel
HUNE - High Frequency Spectrum Unbundled Network Element
ICDF - InterConnection Distribution Frame
IDE - Interconnector Designated Equipment
IOF - Interoffice Facilities
MUX - Multiplexor
NI - Network Interface

Note: Although the drawing shows traffic from the end-user to the UPS ATM Interface Port, traffic is bidirectional.

Unbundled Packet Switching - ATM Interface Port in Non-RT Office



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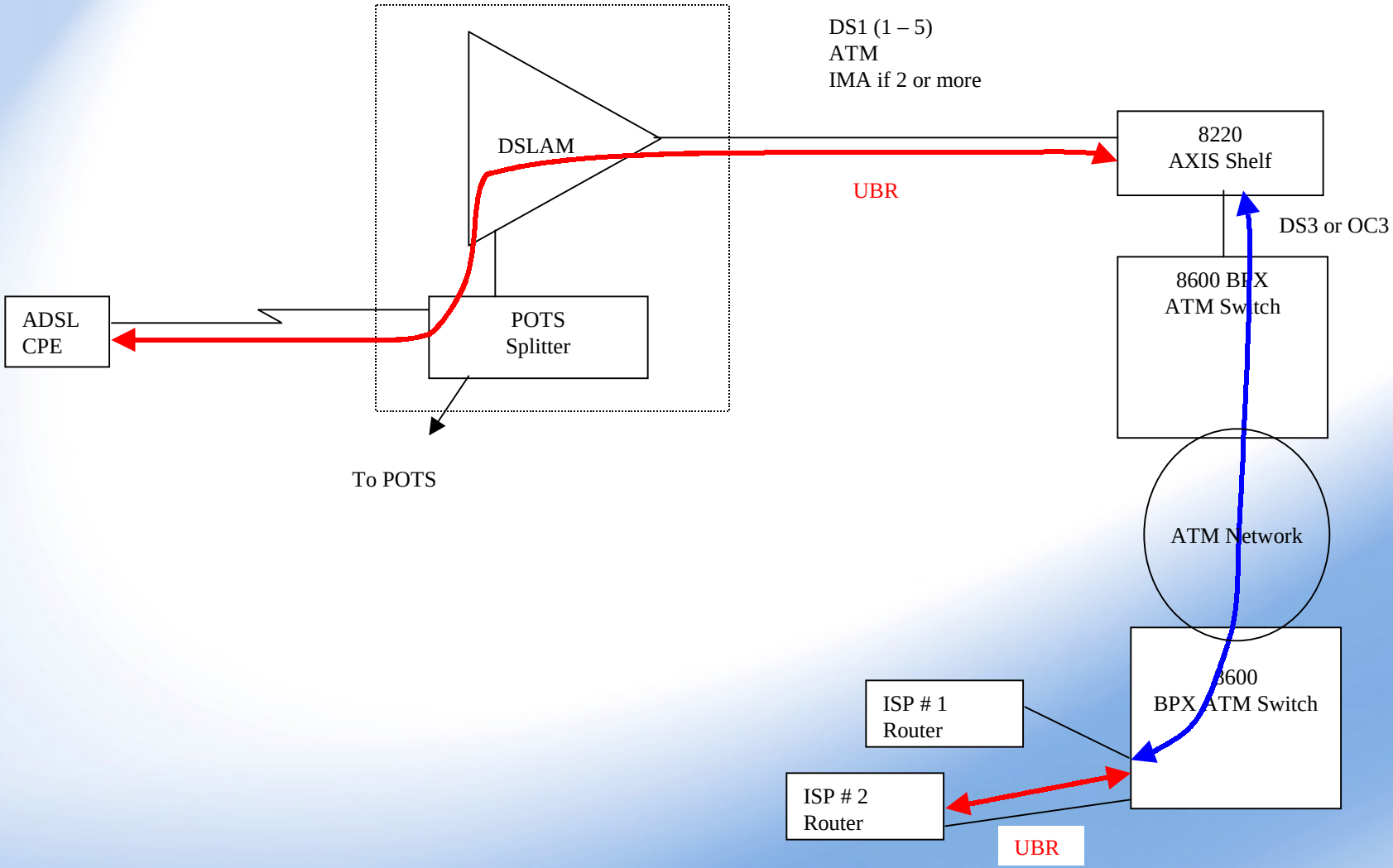
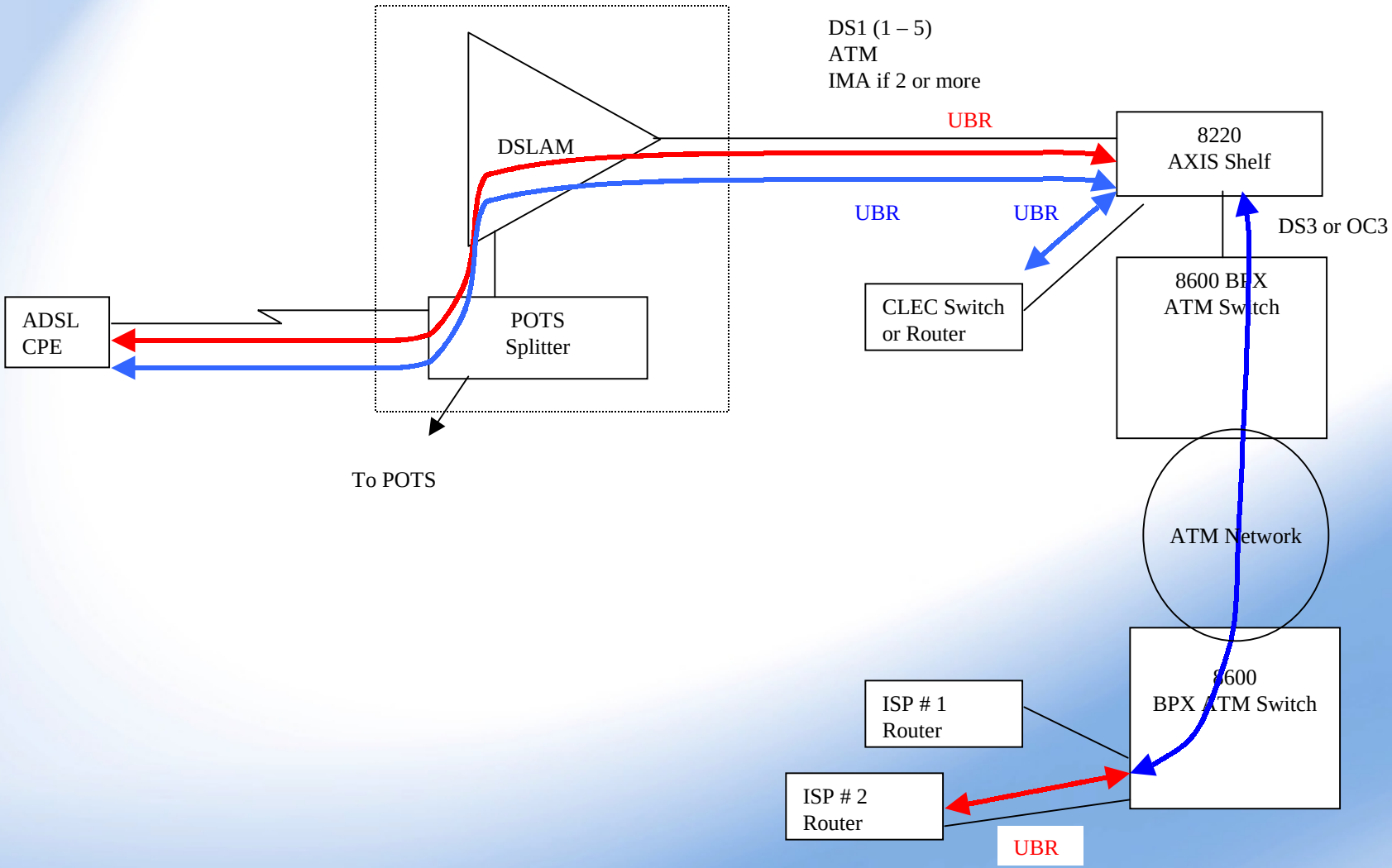
Note: Although the drawing shows traffic from the end-user to the UPS ATM Interface Port, traffic is bidirectional.

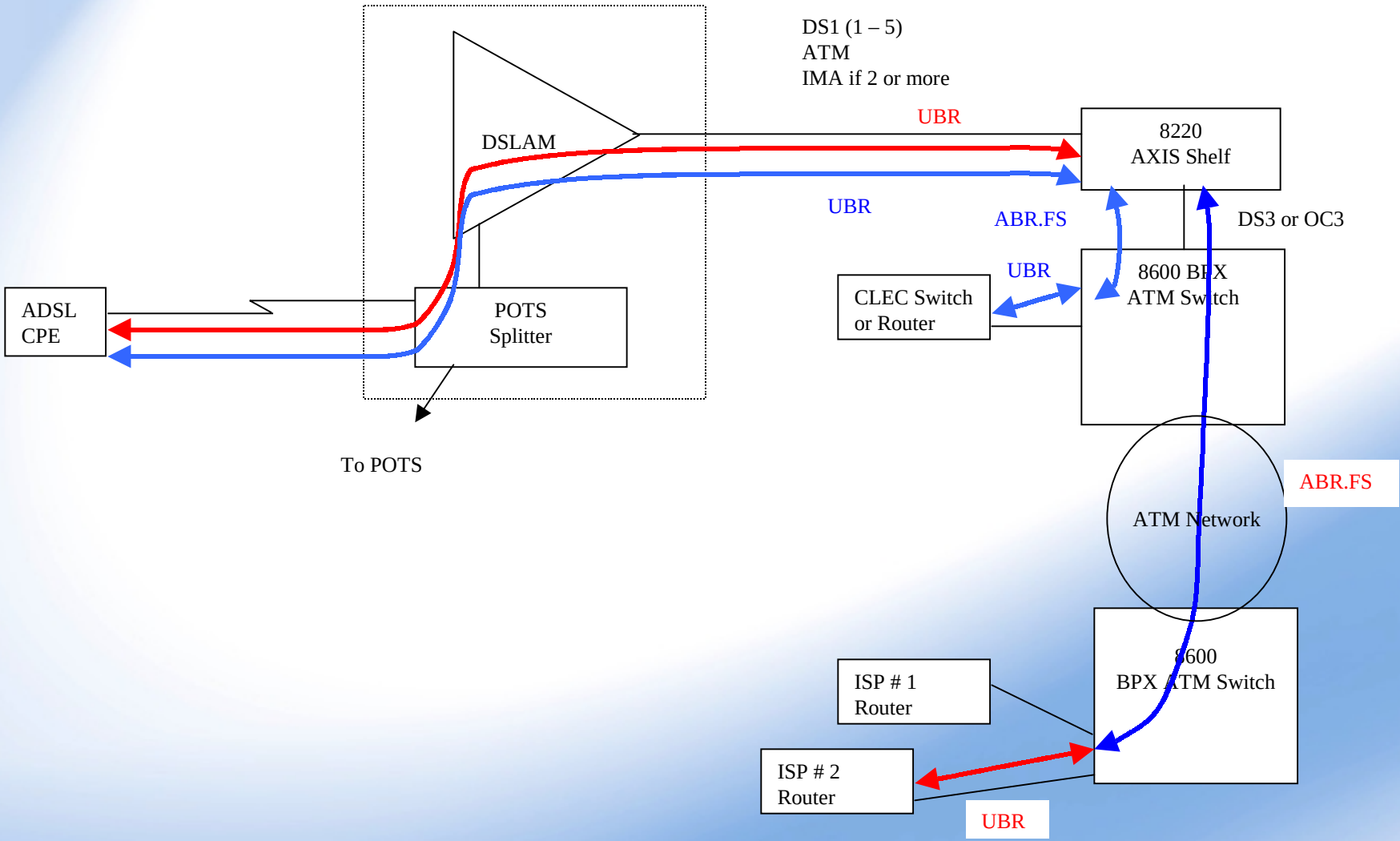
Bit Rate in Current Architecture For Qwest DSL



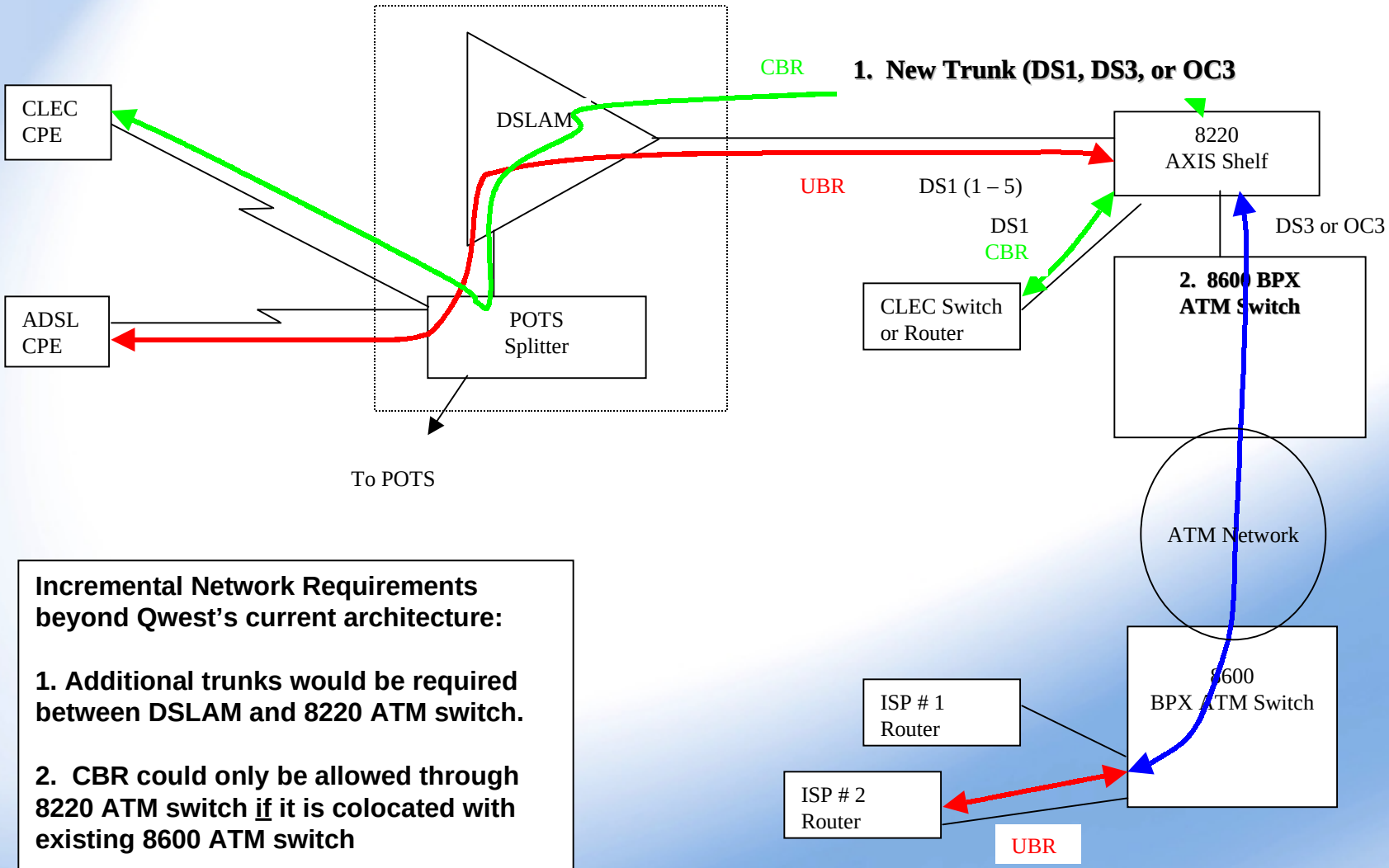
Bit Rate in Architecture for UPS
(DS-1 Handoff, UBR Only)



Bit Rate in Architecture for UPS
(DS-3 Handoff, UBR Only)



CLEC Proposed Architecture #1
(DS-1 Handoff, UBR & CBR)

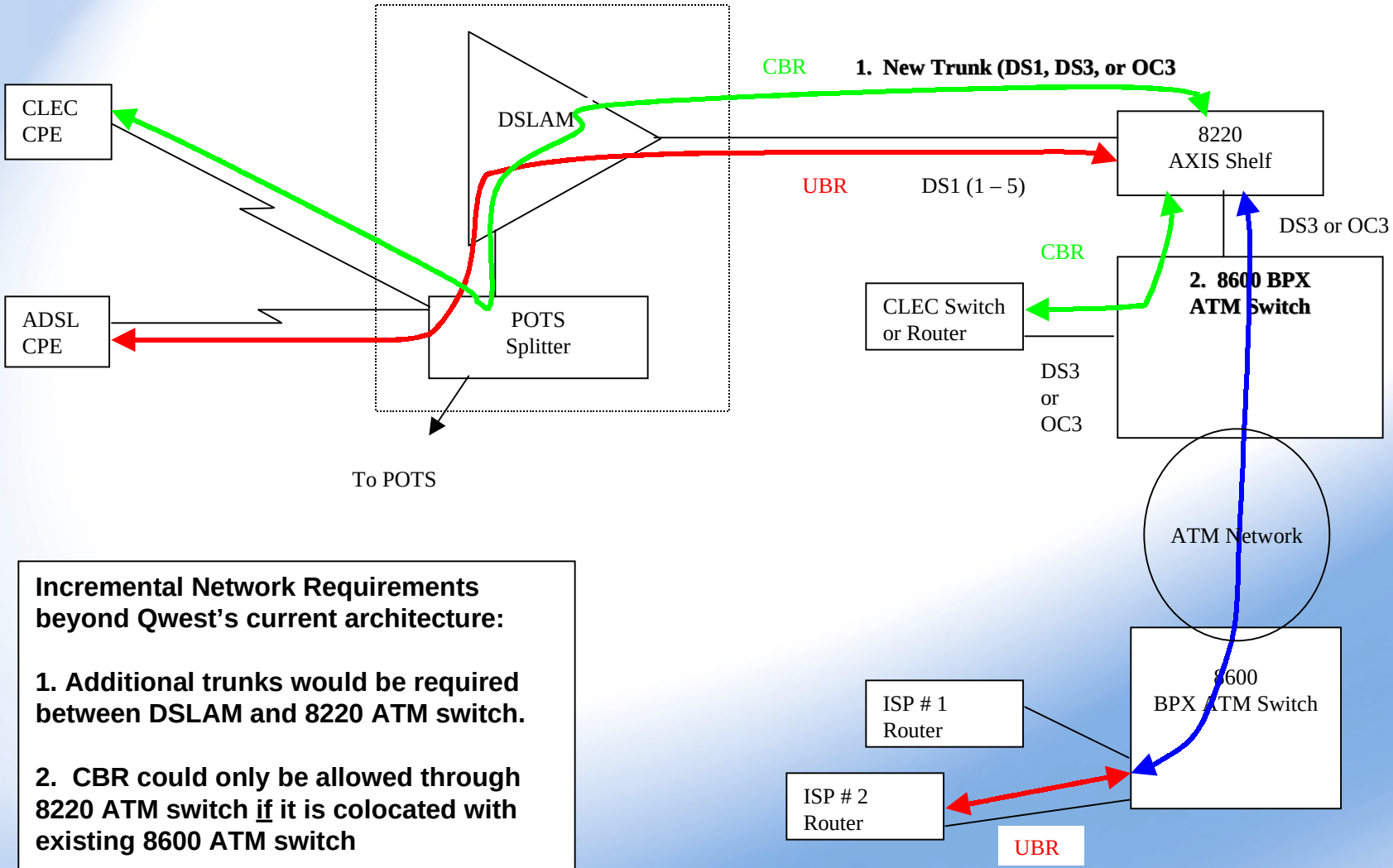


Incremental Network Requirements beyond Qwest's current architecture:

1. Additional trunks would be required between DSLAM and 8220 ATM switch.

2. CBR could only be allowed through 8220 ATM switch if it is colocated with existing 8600 ATM switch

CLEC Proposed Architecture #2
(DS-3 or OC-3 Handoff, UBR & CBR)

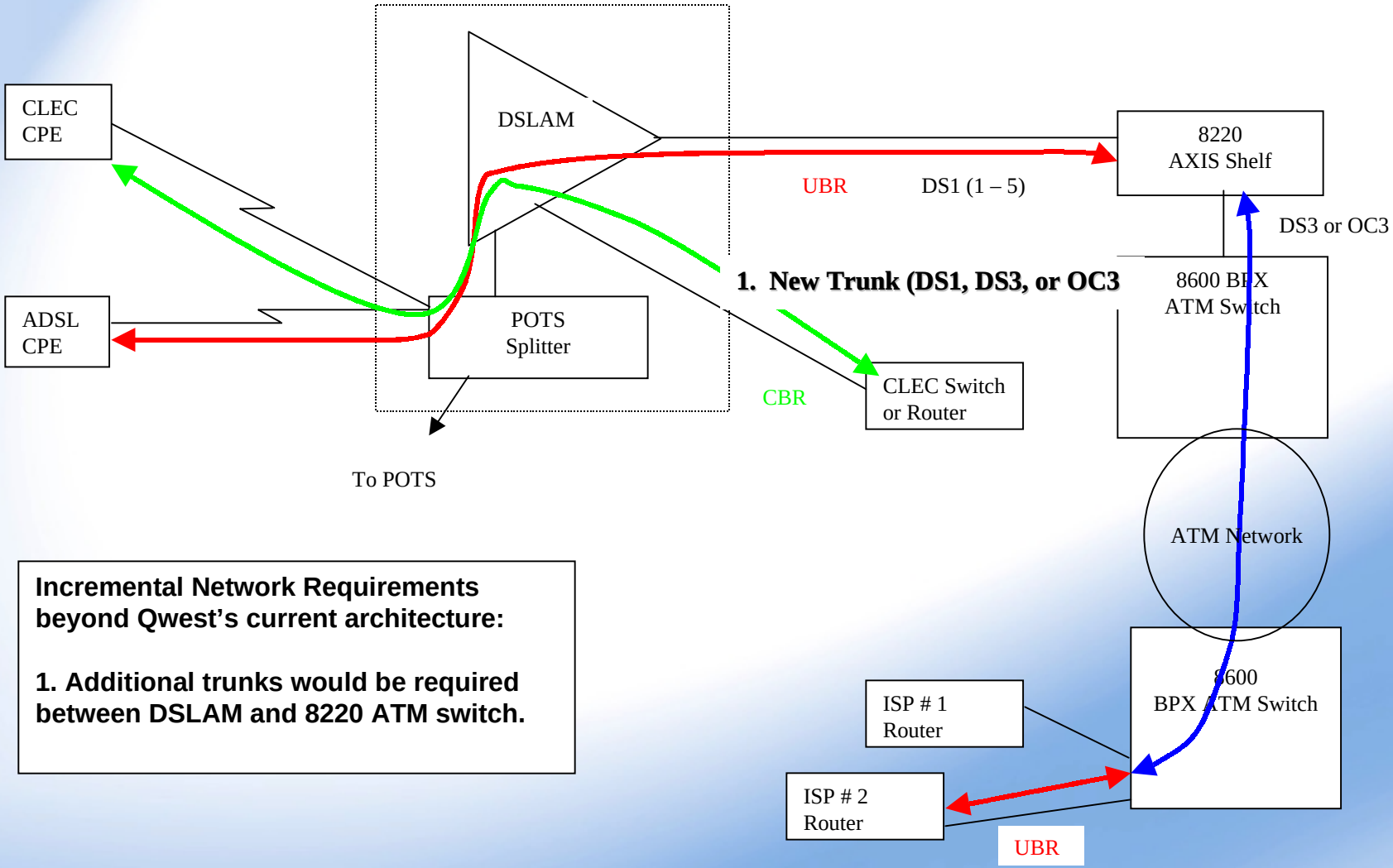


Incremental Network Requirements beyond Qwest's current architecture:

1. Additional trunks would be required between DSLAM and 8220 ATM switch.

2. CBR could only be allowed through 8220 ATM switch if it is colocated with existing 8600 ATM switch

CLEC Proposed Architecture #3
(Direct Trunk Between DSLAM & CLEC)



Incremental Network Requirements beyond Qwest's current architecture:

1. Additional trunks would be required between DSLAM and 8220 ATM switch.